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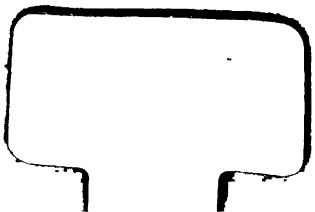
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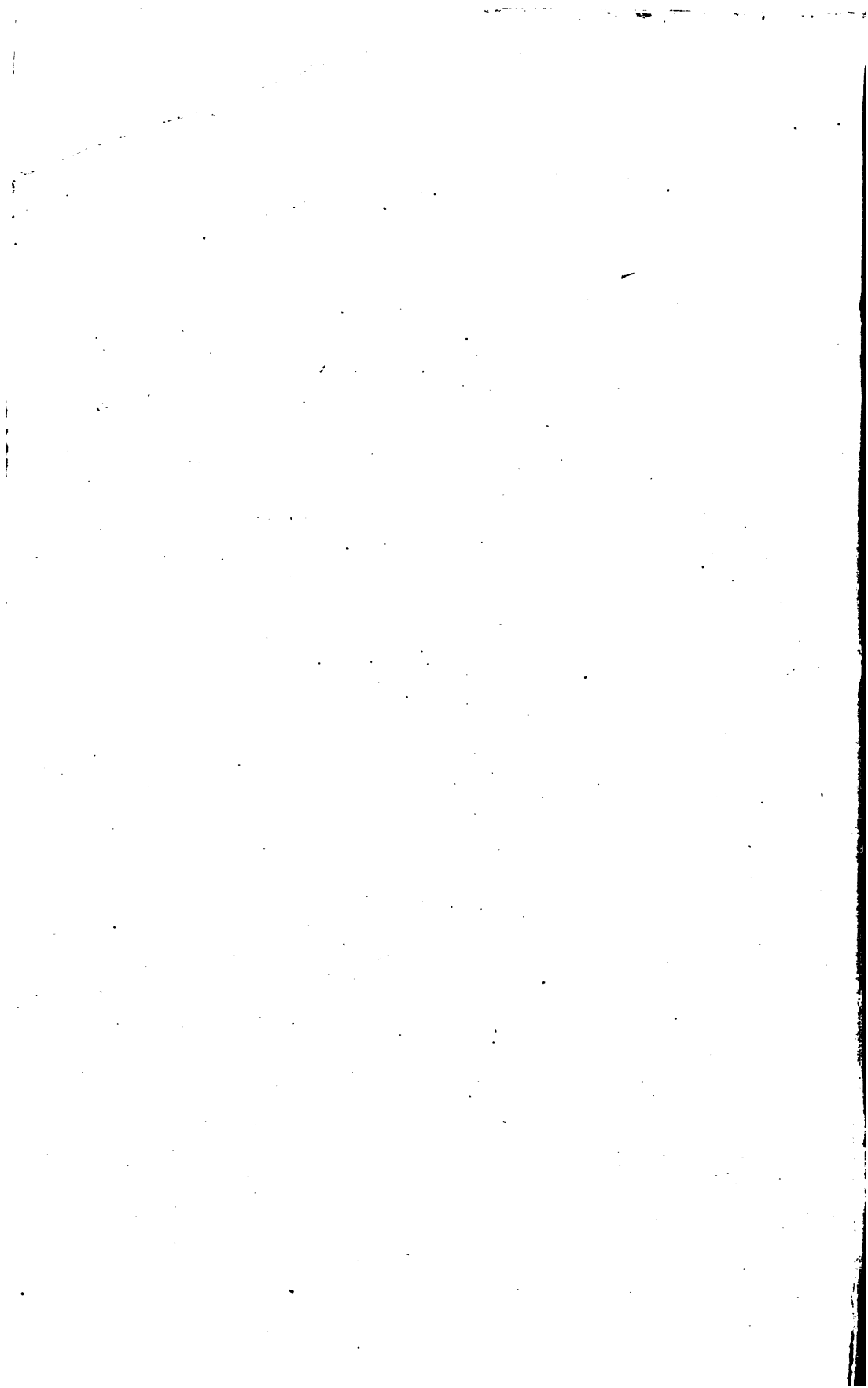
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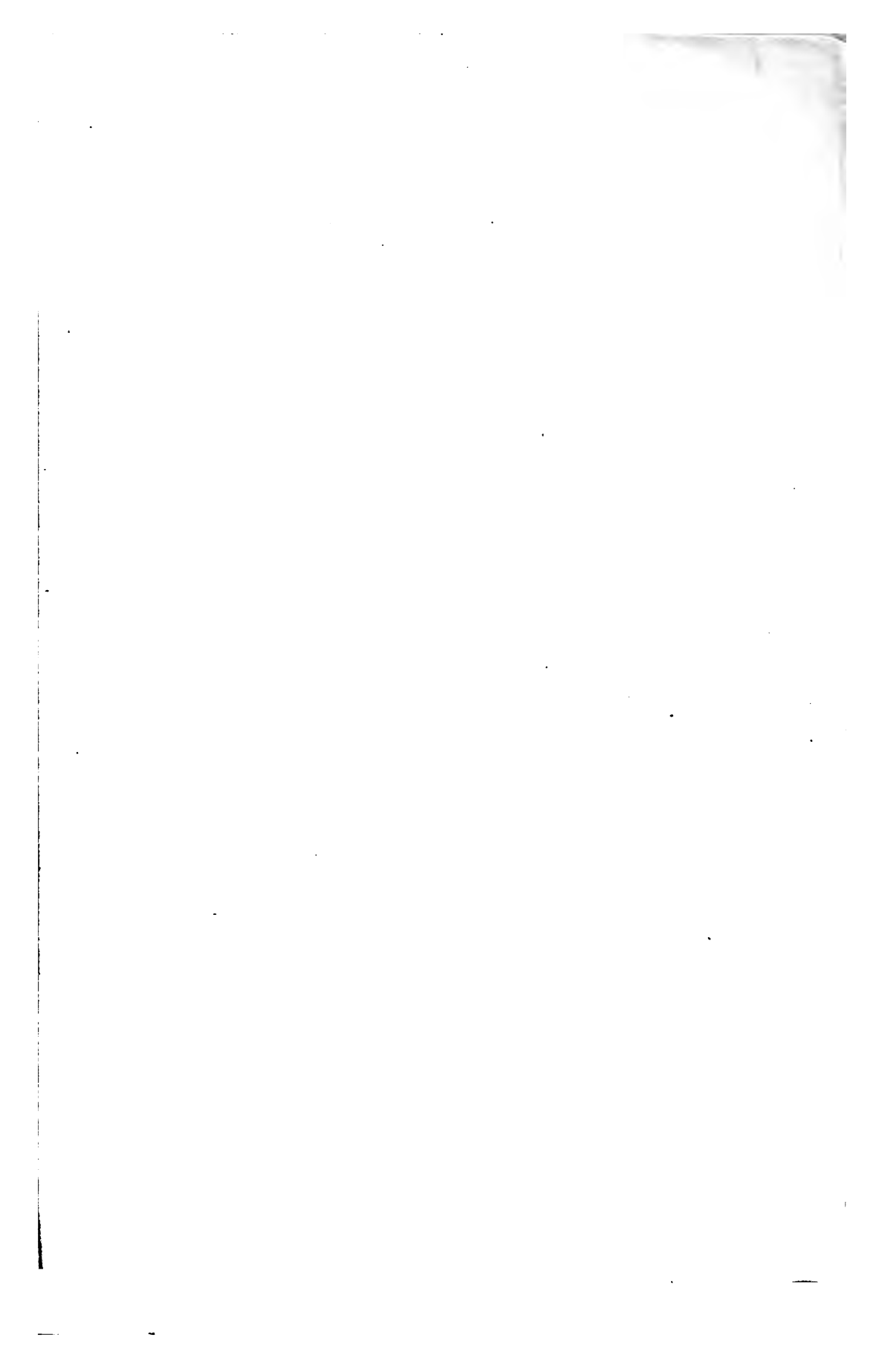
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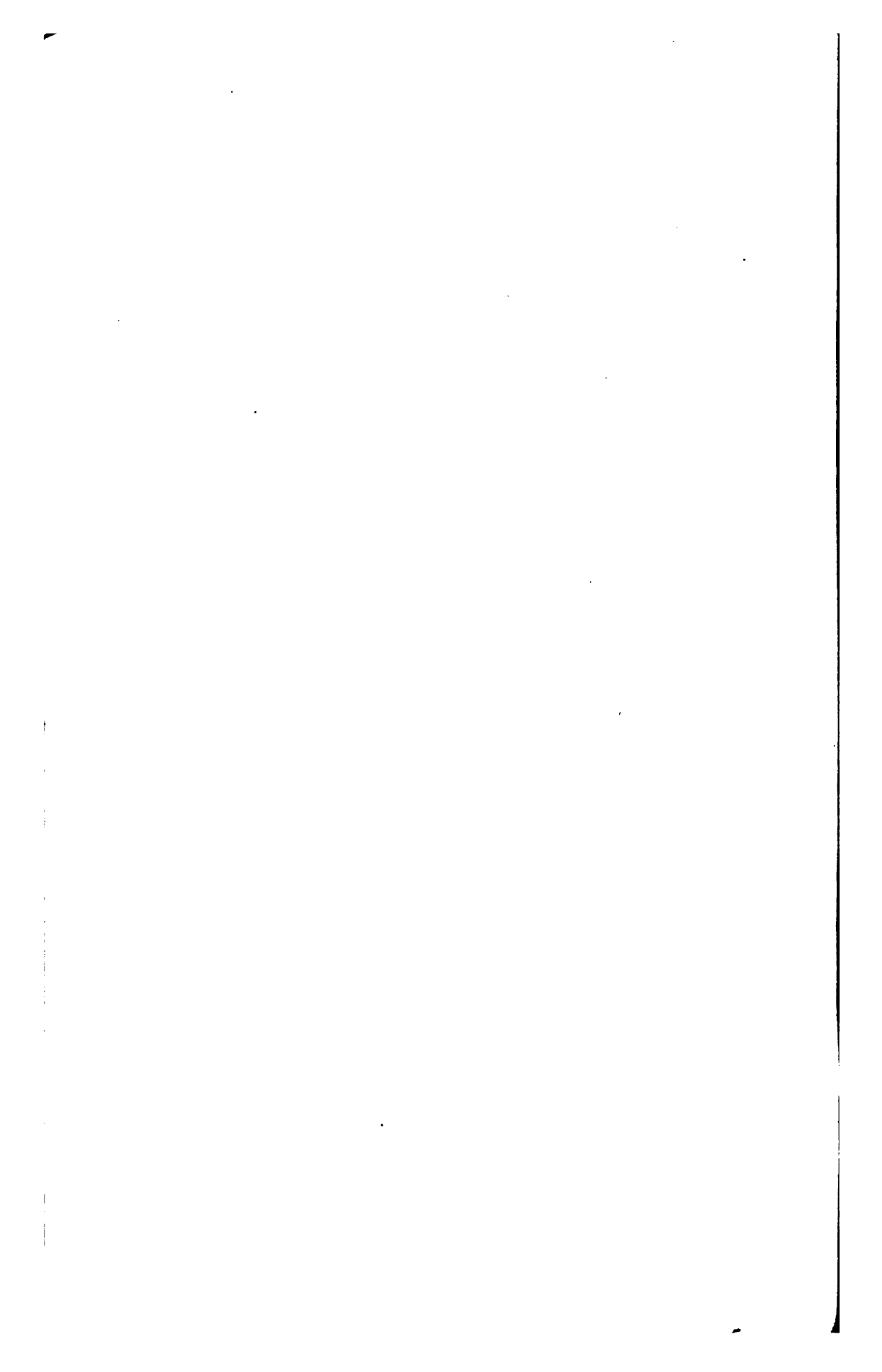
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TELEGRAPHING AMONG THE ANCIENTS.

IT is at the supreme crisis of the Iliad. Achilles has been sulking and chafing in his tent for many days ; since his bitter quarrel with Agamemnon, the Greeks have suffered disaster, almost annihilation, from the Trojans ; Patroclus has at last obtained permission to go forth clad in the armor of Achilles to beat back the foe, has been led away too far by the frenzy of war, till he has met his doom, and is now borne back by the Greek chieftains, pursued by the Trojans wild with victory behind them. Antilochus hurries with the dread tidings to Achilles's tent, and Iris descends from Olympus to urge Achilles even without his armor to show himself at the trench, and let the Trojans see that he is again ready for the battle-field. It is then that the poet says : —

“ So up rose Achilles dear to Jove ; and about his strong shoulders Athene threw the tasselled ægis, and o'er his head she set the circlet of a golden cloud that shot forth the flame of gleaming fire. As when a smoke rolls up from out a town high into the upper air afar from out an island home which foes are beleaguering, and they all day long from their city walls do battle in bitter strife ; and at the setting of the sun beacon-fires blaze forth in close succession, and their flame darts on high for those who dwell about to behold, if haply they may come with ships to help them 'gainst their ruin ; so bright a sheen from Achilles's head went up to upper air.”

This magnificent simile, which the poet has chosen to adorn the turning point of his epic (Σ. 203-214), presents to us the two chief methods employed by the ancients in telegraphing to distant points, and also furnishes us with the earliest instance of their use to be found in our classic literature. So simple, so obvious and ready a means of notifying friends that danger has come or help is coming must have been hit upon in the earliest times, and no doubt has been resorted to by all peoples in all ages. My consideration of its use will be confined chiefly to the Greeks. The conformation of Greece itself, and of the surrounding seas with their numerous islands, presenting their mountain peaks in all directions shooting up into the clear ether, whether from the mainland or the islands, offered especial opportunities for the employment of beacon-fires and beacon-smoke, and we may rest assured that the occasional references to them in our literary sources represent but a small fraction of the actual cases of their use. To arrive at a clearer conception of the methods employed, and the distances from beacon to beacon, I shall follow our sources down the line of centuries, leaving the poets out of the question for the present.

Herodotus furnishes us with two well known instances. The first (VII. 182) is when the vanguard of Xerxes's fleet has set out from Therma, and falls in with three Greek ships on outpost duty far up the Magnesian coast. This is announced to the Greek fleet lying at Artemisium by beacon-fires from Sciathus, a distance of less than twenty miles, it would seem.¹ The second (IX. 3) falls a year later, after Xerxes has fled back to Asia and has taken up his headquarters at Sardis, awaiting news of a second capture of

¹ The distances cited are obtained by measurements on the scale chiefly of Kiepert's *Atlas Antiquus*, 1882. Minute exactness cannot therefore be expected, especially where the precise points are so indeterminate as in Herodotus, VII. 182. In general, however, the measurements are close enough for our purposes.

Athens by Mardonius, who had wintered with the flower of his army in Thessaly. To convey these tidings to Xerxes from Greece, a line of beacons had been arranged "through the islands." This is a notable fact which we shall return to later, but I may say here that we have some testimony, such as it is, that similar lines of signals were in use quite largely through the Persian empire. The treatise *De Mundo*, called of Aristotle, and habitually printed in the full editions of his works, contains a passage (VI.) to the effect that the dominions of the Great King, extending from the Hellespont to India, have so complete a system of communication with the capitals, Susa and Ecbatana, by messengers, and especially by beacon-fires lighted in succession from the utmost extremities, that the king knows daily of any attempt at revolt or war. This treatise, however, is not in Aristotle's style, and Zeller is of the opinion that it cannot have been written before the last half of the first century before Christ. A downward limit is obtained from its translation into Latin by Apuleius in the second century of our era. Better evidence than this would seem to be offered by Diodorus (XIX. 57), who says that Antigonus, about 315 B. C., then in possession of the greater part of the Persian empire, arranged a system of beacon-fires and couriers throughout his dominions, by which he was served with great speed. This may have been a revival of the Persian system in the case of the beacons,¹ as we

¹ Cf. also Ephorus, *ap. Steph. Byz. ad voc. Πάρος*; Corn. Nep., *Miltiad.*, VII. The Jews maintained a monthly series of signals from Jerusalem to Babylonia, to announce the appearance of the new moon, as described in the Talmud (translation by J. Barclay, 1878, p. 151): "At first, high flames were lighted, but when the Samaritans mimicked them, it was ordained that messengers should be sent forth. 'How were these flames lighted?' 'They brought long staves of cedar wood, canes, and branches of the olive tree, and the tow of flax which was tied with twine. And one went to the top of the mountain and lighted them, and waved the flame to and fro, up and down, till he could perceive his companion doing so on the second mountain, and so on the third

know from Herodotus that it was of the couriers. Mardonius could not have arranged his line of beacons straight across to Sardis by way of the Cyclades, because the Greeks became masters of the sea immediately after the battle of Salamis and the return of the Persian fleet to Asia, in the preceding year. With good reason, therefore, has Rawlinson said that the line must have passed "along the European coast to Athos, and thence by Lemnos to Asia." The significance of this will be seen later.

From Thucydides we have several notices of fire-signals. The earliest (II. 94, Diodorus, XII. 49) is in 429 B. C., during the night attack made upon Salamis by the Lacedæmonians, who set out secretly from Megara with the purpose of surprising the Piræus, but were prevented by faint-heartedness, or, as they said, by a high wind, which induced them to confine their operations to the island. The tidings were conveyed to Athens by fire-beacons. As the plural (*φρυκτοί*) is used, we may suppose that more than one were lighted, probably conveying the news across towards the eastern side of the island, and then flashed straight to Athens, perhaps also repeated from Piræus, as the people of the city are said to have thought that the enemy had sailed into Piræus, those of Piræus that Salamis had been taken. All the northeastern heights of Salamis, ten to twelve miles distant, are in full view from the Acropolis, or from the towers of the city wall which ran up over the Nymphs' Hill, the Pnyx, and the Museum Hill.

mountain,' etc. 'And where were these high flames lighted?' 'From the Mount of Olives to Sartaba; from Sartaba to Grophinah; from Grophinah to Hoveran; from Hoveran to Bethbaltin; there they did not cease to wave them to and fro, up and down, till the whole country of the Captivity (Babylon) looked like torches of fire.'" This account must omit some stations between Hoveran (Hauran) and Bethbaltin, "from which the trees of Babylonia appeared like bushes."

The next case mentioned (Thuc., III. 22) occurred the following year, when the two hundred and twelve Platæans and Athenians made their nocturnal sally from beleaguered Platæa, succeeded in mounting the wall of circumvallation built by the besiegers, and escaped. As soon as the besiegers discovered that they were mounting the wall, they raised beacon-lights towards Thebes indicating danger; but the Platæans remaining within the town had made preparations against this, and raised counter signals to render those of the enemy unintelligible. The scholiast on this passage explains the difference between hostile and friendly signals, both of which are frequently mentioned. Those indicating an enemy were kept in motion, the contrary were held still. This explanation is attested by Aristotle (*De An.*, III. 7). Thucydides does not tell us whether the signals were answered from Thebes. From the low spur upon which Platæa was situated, the present town of Thebes, which is built on the ancient Cadmea, is not visible, though only about eight miles distant. Low hills just south of the Cadmea completely hide the landscape beyond. I doubt if the height gained by city walls and towers would have made them visible to each other. It is probable that watch-towers at some higher points near Thebes were expected to pass on the signal. A severe storm was also raging.

In the following year, 427, during those heart-rending scenes of party bloodshed enacted in the city of Corcyra, a Lacedæmonian fleet of fifty-three sail was lying off the southern end of the island, at Sybota (Thuc., III. 80), when just after nightfall beacon-fires signalled to them from Leucas that a fleet of sixty Athenian triremes was sailing up the coast. From Leucas to Sybota the distance is about forty-five miles, and Leucas with its lofty mountain rising above the town could easily send the light thus far. It is assumed by most of

the commentators on this passage, that not only the approach of a fleet, but the number of vessels contained in it, was signalled. That a large number at least was signalled seems most likely; for the considerable Lacedæmonian squadron stole away along the coast that very night, and took refuge at Leucas, which they would hardly have done at a mere venture. This signalling may have been accomplished by a series of sixty fires at intervals along a line at right angles to the line of view, or perhaps by some less definite code, like that fixed by act of the Scotch Parliament at Edinburgh in 1455, which directed that one bale burnt at a station should be a warning that the English were advancing; two, that they were come; four side by side, that they were in great force.

Again (Thuc., IV. 42), the Corinthians were apprised by fire-signals of the landing of the Athenians at Solygeia; but here the distance was only two and a half miles to the port town, Cenchreæ, and seven to Corinth itself. For a still shorter distance this signal was employed at Torone to inform Brasidas, who was lying in wait close by its walls, that the gates had been opened by a party of traitors, and all was ready for him to capture the town (IV. 111).¹

The last case in Thucydides is an interesting and complicated one. It is the year 411. A squadron of eighteen Athenian ships lay at Sestos in the Hellespont, and sixteen Lacedæmonian opposite them at Abydos. Mindarus with a fleet of seventy-three Lacedæmonian ships slipped past the Athenians with sixty-seven lying at Lesbos, turned Lectum promontory in the afternoon, and dropped anchor about Sigeum and Rhoeteum before midnight. The coast on

¹ The Greeks had a special word, *παραφρυκτορέω*, for such treasonable signalling from town or camp. A brother of Agoratus was bastinadoed to death by Lamachus for this before Syracuse (Lys., XIII. 67).

the right was in the hands of Sparta's friends, the Chersonese was Athenian. As soon as Mindarus approached the mouth of the Hellespont, Athenian warders telegraphed the announcement to the Athenians at Sestos. As Thucydides says (VIII. 102), "They knew from the beacons which their scouts kindled, and from the sudden blaze of many watch-fires which appeared in the enemy's country, that the Peloponnesians were on the point of sailing into the strait"; and furthermore, "the Peloponnesians at Abydos were told by their now approaching friends to keep a sharp lookout if the Athenians tried to get away." From the mention of the fires in the enemy's country, I think it a fair inference that it was by these fires that the warning was transmitted by Mindarus to his countrymen at Abydos. Sigeum and Rhœteum are not visible from Sestos or Abydos, some twenty miles distant. A high range of hills borders the Hellespont close to the water's edge on the side of the Chersonese, and others hem the Asiatic side, though less closely. The Athenian station at Sestos appears to have kept a regular lookout on watch at the entrance of the Hellespont; whether, with others, to pass on the intelligence to Sestos, or whether the height above Sestos is visible from that at the entrance, I cannot say. Xenophon speaks of this watch when describing the approach of fourteen Lacedæmonian ships under Dorieus during the closing months of the year 411. Dorieus arrived by day (*Hellen.*, I. 1), and the Athenian fleet hastened down to engage him the same day at Rhœteum. The intelligence was probably conveyed by smoke-signal, or flag-signal.

Xenophon himself had an experience with the gathering of foes summoned by bale-fires. It was when he had returned from the expedition of the Ten Thousand, and was leading a remnant of his force from the Troad into Æolia

(*Anab.*, VII. 8). Reaching Pergamus, he was told that Asidates, a wealthy Persian occupying a castle in the plain, might be readily captured, and the force enriched by his booty. Accordingly, Xenophon led out a detachment of three hundred men at night; but they found the castle far stronger than they expected, and it was some hours before a small breach even could be made through the brick wall. In the mean time, Persian forces began to gather from several neighboring towns, called by the fire-signals, and Xenophon was well content to reach Pergamus in safety, after hard fighting and assistance hurrying to him from that city.

Xenophon does not speak often of this form of telegraphing in his *Hellenica*. One notable instance is this (VI. 2. 33). When, in 373 B. c., the Athenian Iphicrates had made his memorably rapid voyage with his fleet around the Peloponnesus to Corcyra, in order to save that island from the Lacedæmonians, he heard on his arrival that Dionysius of Syracuse was sending out ten triremes to assist the Spartans, and that they would probably soon arrive in the vicinity of Corcyra. He accordingly goes out in person to inspect the points where their approach could be seen, and where the position of the lookouts would be in sight of the city at the same time. The voyage from Italy, then as now, was habitually to the north end of the island, and thence down through the straits to the town of Corcyra. There are two favorable points suited to the purpose of Iphicrates. One is the height of San Salvatore, with an elevation of three thousand feet, rising in a fine majesty about eight miles across the bay to the north of the town, and commanding a view of nearly the whole island and all the surrounding region. The second point, far easier of access, and now reached by an excellent macadamized road, is the Pass of Pantaleone, about a dozen miles northwest of the town. Here, standing

upon the height a few minutes to the left of the road, you have the city behind you, and the north slope of the island descending gradually to the shore, five or six miles away. Beyond, to the north and west, the sea stretches out before you; but close at hand is a group of small rocky islands, the Othonian, in one of which some have seen the ship of Ulysses, which was struck into stone by the hand of Poseidon. It was among these islands that the fleet of Dionysius was espied by the lookout, and there they moored (Polyæn., III. 9. 55). The signal was given to Iphicrates, who sailed out and captured all the vessels but one.

In that famous passage of Demosthenes on the Crown, where he says (§ 169), "T was evening, and a messenger came announcing that Philip had occupied Elatea," it is added that the booths in the Agora were burnt by the authorities while carrying out other vigorous measures in preparing for the dangerous crisis. The commentators have often tried to answer the natural question, Why were the booths burnt? Some have found satisfaction in the explanation, that it was done to clear the Agora for the meeting of the citizens on the following morning. But such meetings of the Ecclesia were not held in the Agora, and the orator tells us distinctly that the people sat next morning *ἄνω*, that is in the Pnyx as usual, looking down on the Agora. Others, with far more reason as it appears to me, have regarded the measure as a beacon-fire to attract the attention of all the surrounding country immediately and most effectively. True, the Agora was not on high ground, but it contained in the booths precisely the material ready at hand for a great bonfire, and would instantly advertise the people of the impending danger.

By the middle of the fourth century before Christ, tactics had been so far reduced to a science that it became the sub-

ject of special treatises. We have a portion of a work by the Arcadian Æneas, surnamed Tacticus or Poliorceticus, in which (§ 6) he gives directions for the posting of lookouts, at least three, upon some conspicuous height adjacent to a town if an enemy is apprehended. The lookout should be well versed in warfare and the subterfuges of enemies, and withal quick-footed, that he may be able to carry the message himself if he finds it difficult to signal. It is still better if horses can be employed. In case his post is out of sight from the town, a line of lookouts should be arranged to pass on the signal. These are lookouts by day, and their signals seem to be standards that are raised and lowered like those on board ship. Xenophon (*Hellen.*, VII. 2. 5) speaks of such lookouts posted on Mount Trikaranon above Phlius, who signalled to the town that the enemy were approaching through the adjacent valley of Nemea (B. C. 368). He does not indicate the nature of the signal employed. Prof. J. K. Rees has queried whether, considering the use made of mirrors by Archimedes, these were not also employed in signalling. Something of this kind seems implied in the shield that Herodotus (VI. 121) says was displayed (probably from Pentelicus) as a signal to the Persians after the battle of Marathon, and in that ordered by Lysander to be raised in mid-passage by his observation galleys when the Athenians had drawn up on shore at Ægos Potamos (*Xen., Hellen.*, II. 2. 27). Demetrius, off Salamis in Cyprus, gives the signal for battle by displaying a gilded shield (*Diodor.*, XX. 51); and a shield is used by Antoninus for a similar purpose (*Dio Cass.*, LXXVII. 13).

The treatise of Æneas on beacon-fires has been transmitted to us by Polybius (X. 44). He introduces it while describing the arrangements made by Philip V. of Macedon against the land force of the Ætolians on one side, and the fleet of the

Romans and Attalus in the *Ægean*. Philip had himself taken up his post at Demetrias on the Gulf of Volo, and ordered the people of Peparethus, of Phocis, and of Eubœa, if the enemy appeared, to send him instant tidings by beacon-fires to Mount Tisæus, on the promontory that projects from Magnesia toward the entrance to the Gulf of Volo. This mountain was excellently adapted to the purpose, says Polybius; very lofty, adds Livy (XXVIII. 5. 17); a remark attested by Leake (*Travels in Northern Greece*), who also sets its height on his map at 2,400 feet. Peparethus would be easily visible from here; likewise Mount Kloma in Phocis (3,500 feet), if this were made one of the stations. But from Chalcis it would be necessary to have a line of beacons up the coast, or from Chalcis to Kandili (4,000 feet high), whence the light would be visible at Tisæus.

After noting this series of signals, Polybius proceeds to give a dissertation upon beacon-fires, which I shall here condense. This method of signalling, he says, is of the greatest service in warfare, because it is in war that the greatest advantage is derived from opportuneness, and this is best secured by fire signals; for they convey intelligence sometimes of what has just happened, sometimes of what is actually going on, and, if they are used skilfully, one may get his information from the distance of three or four days' journey, and sometimes even more, and so take his precautions or strike unexpectedly. Formerly the system was so primitive that it was of comparatively little service, as it was possible to announce only such things as had been agreed upon beforehand, and those quite simple, as, "a fleet has arrived at Chalcis"; but unexpected events were at fault.

Æneas has made an advance upon this by the following invention. Prepare two earthen-ware vessels of exactly the same size, four feet and a half high, one and a half in

diameter. Fit flat corks within these, so that they shall easily slip up and down, and in the middle of the cork fix a staff divided into spaces of three fingers' breadth by a clearly marked line, and in each space write one of the events most likely to occur in war, as "cavalry have passed the border," "heavy infantry," "light armed," "ships," "corn," etc., until all the spaces are filled. Then tap the vessels carefully near the bottom with holes of the same size, so that the same amount of water will run from each tap within a given time. Cork the holes, fill the vessels with water, put on the flat corks with their rods, and set the taps running at the same moment. Both rods will descend simultaneously to the line above which is written the fact to be telegraphed. So provided, let them be placed each upon a point of observation. When a message is to be sent, the sender will first raise a beacon to advertise the other observer, and wait until it has been answered; then both will instantly set the taps running, and the sender will watch till the rod has descended to the line marking the message, when he will raise another beacon. The receiver will stop the water, and note the fact marked on the rod at the edge of his vessel, and he will have his message. This system, Polybius says, is an improvement on its predecessors, but is lacking in range and in detail as to the number of the enemy, place where he has entered the country, etc., all of which are essential to success in confronting the dangers.

Another system invented by Cleoxenus and Democlitus, and perfected by Polybius himself, spells out the words completely, but in its working, as he acknowledges, requires attention, and more than ordinarily close observation. It is this. Divide the alphabet into groups of five letters, in regular sequence, and write each group in order down a board of suitable height, thus:—

A	Z	Λ	Π	Φ
B	H	M	P	X
Γ	Θ	N	Σ	Ψ
Δ	I	Ξ	T	Ω
E	K	O	Υ	

There will be five boards, the last bearing only four letters, which will be no hindrance. Each observer will be furnished with a set of these boards and a stenoscope (*διόπτρα*) with two funnels, to enable him to distinguish through one the right, through the other the left, position of the signal-man opposite him. To begin the operation, the signal-man will raise two torches, the receiver respond with two, in order to show that all is attention. To indicate the tablet to be observed, the sender raises one torch on the left for the first, two for the second, and so on; for the intended letter on the tablet, one torch on the right if for the first, two if for the second, etc. Reduce the message to the fewest possible words. Suppose the word *ΚΡΗΤΕΣ* is to be sent: *K* is on the second tablet, fifth place,—hence, raise two torches on the left, five on the right; *P*, fourth tablet, second place,—raise four torches on the left, two on the right; and so on.

The boards are set up near the stenoscope, and a fence constructed to the right and left, for ten feet each side, as high as a man's head, at the ends of which the torches shall be raised in order that the receiver may clearly distinguish the right position from the left, and the torches may be hidden when lowered behind the fence. Polybius closes this discussion with a characteristic remark: "I was led to say this much in connection with my former assertion, that all the arts had made such progress in our age that most of them were reduced in a manner to exact sciences; and therefore this too is a point in which history properly written is of the highest utility."

It may be remarked, that both the systems here described presume the use of torches, not beacon-fires, because the light must be extinguished instantly, or be easily put out of sight. Hence the distances between stations must be comparatively short; ten miles is now found to be a range of convenient limit. Prof. Rees calculates that ten miles also is about the limit at which the right and left position at the ends of a fence twenty feet long could be distinguished through the stenoscope. Yet the language of Polybius is based entirely upon the notion of one telegrapher and one receiver only. These, therefore, must be taken as types merely, if he contemplates the transmission of messages, as he says is possible, over a distance of three or four days' journey, or even more. That either of the systems mentioned was ever practically employed in antiquity, I find no evidence; but that of Polybius contains the fundamental principle of the best modern system of signalling. What Polybius means by a journey of three days may be seen (II. 55) from his giving this as the distance from Ægium to Megalopolis, which is sixty-five to seventy miles as measured on the map, and through one of the regions of Greece most toilsome to traverse.

Among the Romans we hear occasionally of smoke and fire employed for signalling, and these also among the Carthaginians. Livy (XXII. 19) speaks of a regular system of watch-towers and lookouts in Spain against the pirates; and Plutarch (*Pomp.*, 24), describing the condition of the Mediterranean before Pompey's famous hundred days' campaign against the pirates, adds that the pirates had their naval stations and beacon towers in divers places.

Lighthouses at the entrance of harbors may also find mention here. The Pharos at Alexandria is a well known example. There were three at the Piræus, one at the extremity of Eetionea on the western side of the harbor, known to us

only within the past three years, through an inscription of the year 393 B. C. found in the old wall (*Bull. de Corr. Hellén.*, 1887, pp. 129 *seq.*); the second, farther to the west, nearer the Rogues' Harbor (Demosth., 932); the third, opposite to this, on the east side of the entrance to Piræus, at the very extremity of the peninsula. Here the visitor in search of the so called tomb of Themistocles mentioned by Plutarch (*Themist.*, 32), mounts upon some huge drums of columns and looks about him. Just yonder, to the right, is Salamis, as perfect in its outline and beautiful in its coloring as on the day when Themistocles won there his greatest fame. Behind you is the port which Themistocles created, and where he established the maritime power of Athéns. Before you, almost at your very feet, is a grave sunk in the solid rock, into which the waves dash and recede, dash and recede, dash and recede, till your imagination gains the mastery, and cries, "Yes, this is the grave of Themistocles; and the faithful sea never ceases its fruitless task to wash away the stain of treason from the grave of its ally." Be this as it may, you are standing upon the remains of the Pharos once constructed here to light the benighted vessel safely into port.¹

Arrangements for signal-fires in the towers of a city wall were so much a matter of course in the days of Aristophanes, that in his city of Cloud-Cuckoo-land built by the birds, they are mentioned (*Av.*, 1161) in conjunction with the guards and the patrol that goes about with his bell. The old Megarian, Theognis (561), calls the beacon-fire the voiceless messenger of tearful war; and Pindar, in his splendid imagery, sings (*Isthm.*, III. (IV.) 61) that he shall now kindle the beacon-fire of his hymn. Such figurative use of the terms is especially common in late writers.

¹ Curtius and Kaupert, *Karten von Attika*, Erläuternder Text, Heft I. p. 55.

We may now turn back on our course from the historic, to the poetic and less substantial, or more mythic, mention of beacon-fires. It was the tradition of some that they were invented by Palamedes, — that unhappy sage of the heroic times, a man too wise for his compeers, — and his father, Nauplius, wreaked his vengeance on the slayers of his son by employing the latter's invention. Sailing to Troy on learning the death of Palamedes, and obtaining no satisfaction from the chieftains, he returned home and bided his time. Hearing of the return of the Greeks, he went to Eubœa, and during the great storm lighted beacon-fires along the dangerous coast, and lured many of the returning heroes to destruction. This exploit was made the subject of a play by Sophocles, the "Nauplius Pyrcæus," and is alluded to by Euripides (*Hel.*, 767, 1127) and by Propertius (IV. I. 115). Others attribute the invention to Sinon, who gave the signal from the Acropolis of Troy to Agamemnon at Tenedos, that all was ready for the opening of the wooden horse and the approach of the fleet. Virgil in his Second *Æneid* (256) speaks of the torch raised on the stern of the royal galley, which is often interpreted from the context as the answering beacon for Sinon. In the Sixth *Æneid* (518), the poet says that Helen gave the signal from Troy. Pausanias (II. 24. 4) carries the usage back still earlier. He relates that when Lynceus, the only cousin not slain by the Danaids, was hurried away into the mountains by the tender-hearted Hypermnestra, she agreed with him that he should signal his safety to her, to still her fond and anxious heart, when well out of danger. He took the road that leads from Argos up the valley of the Inachus across to Mantinea. Reaching the height of Lyrcea, he kindled his signal, and Hypermnestra answered it back from the summit of the Larissa at Argos, and this was regarded as the origin of the Festival of

Torches annually celebrated in Argos. Lyrcea, Pausanias says, is sixty stades (about seven miles) from Argos, and it is the first point, as you descend the gorge of the Inachus from above, where the Larissa becomes visible.

As an explanation of the current expression, "the Locrians and their agreements," Polybius (XII. 12 a) cites the story that the Ozolians of Rhium agreed with the Peloponnesians that if the Heraclidæ should attempt to pass over through their territory, instead of by the Isthmus, they would raise beacon-fires betokening enemies. On the contrary, they actually displayed the signal of friends, and the Peloponnesians, deceived by it, made no preparation to resist the invaders.

We may now approach the magnificent passage of the Agamemnon of Æschylus, in which the poet describes the line of "courier-fires" by which Clytæmnestra at Argos is notified of the fall of Troy, a passage which has been the occasion of my setting out upon this quest. It will be remembered that the play opens with the naive soliloquy of the watchman on the palace roof of the Atridæ, lamenting his year-long vigil, watching the stars, and waiting for the nightly expected signal ever since the tenth year of prophecy had been ushered in. Suddenly, far to the east, on the Arachnæan height, flashes up the beacon-fire that is to end his tedious nights, and he hastens to inform Clytæmnestra with a joy that he does not attempt to repress. The chorus of elders, the tower-strength of Argos, hearing the tidings, appear before the palace to learn the particulars, and while waiting they pour out the burden of their hearts in a song full of foreboding, and of the distant muttering of the coming storm. Clytæmnestra appears with all the seeming joy of the happy wife whose husband will soon be home after the weary waiting. "Troy has fallen," she cries, "on this

very night whose dawn is now ushering in." "But what messenger could come hither with such speed?"

"Hephæstos, flashing forth bright flames from Ida :
 Beacon to beacon from that courier-fire
 Sent on its tidings ; Ida to the rock
 Hermæan named, in Lemnos : from the isle
 The height of Athos, dear to Zeus, e'en next
 Took up the beacon flame, and, soaring up
 So as on high to skim the broad sea's back,
 The stalwart fire rejoicing went its way,
 The pine-wood like a sun sending its light
 Of golden radiance to Makistos' watch ;
 And he, with no delay, nor unawares
 Conquered by sleep, performed his courier's part :
 Far off the beacon, to Euripos' straits
 Advancing, tells it to Messapion's guards ;
 They in their turn lit up and passed it on,
 Kindling a pile of dry and aged heath.
 Still strong and fresh the fire, not yet grown dim,
 Leaping across Asopos' plain in guise
 Like a bright moon, towards Kithæron's steep,
 Roused the next station of the courier flame.
 And that far-travelled light the sentries there
 Refused not, burning more than their commands :
 And then the light swooped o'er Gorgopis' lake,
 And safe arriving at Ægiplanctos' mount,
 Bade the bright fire's due order tarry not ;
 And they enkindling boundless store send on
 A mighty beard of flame, and then it passed
 The headland e'en that looks on Saron's gulf,
 Still blazing. On it swept, until it came
 To Arachnæan heights, our neighboring watch ;
 Then here on the Atreidæ's roof it swoops,
 This light, of Ida's fire no doubtful heir.
 Such is the order of my torch-race games ;
 One from another taking up the course,
 But here the winner is both first and last ;
 And this sure proof and token now I tell thee,
 Seeing that my lord hath sent it me from Troy."¹

¹ Plumptre's translation, slightly altered.

The consideration of this case is in many ways simpler than any other that we have met with. Definite and for the most part well known mountain heights bear the beacons, — Ida, Lemnos, Athos, Eubœa, Messapium, Cithæron, the Megarid, Arachnæus, — so that we can calculate the distances which separate the beacons, and their elevation above the level of the sea. Since the poet has by this preciseness brought himself within the reach of the barometer and the tape-line, has he been daring enough at the same time to pass beyond the bounds of possibility, and select his heights at such distances asunder that the signals could not be seen one from the other? Furthermore, were the circumstances of the time such as to make the line a possible one?

These questions I shall take in reverse order. If we consider the period of the Trojan war, when all the Greeks are represented as engaged in the enterprise, and united in their interests touching it, there is but one point on the line about which there might be question, that of Athos. Appealing to the *Iliad*, we find that this mountain is but once mentioned (*Æ.* 229), and then when Hera sweeps from Olympus over Pieria, lovely Emathia, and the snowy summits of Thrace. From Athos she descends to Lemnos, and then to the lower heights of Ida near the coast of the Troad, following in the last three stations the same line as the beacons, in reverse order. Among the allies of the Trojans who sent contingents to the aid of Priam are named the Ciconians on the coast considerably to the east of Athos, and the Pæonians some distance to the north and west. Athos seems to have lain in an intermediate region, perhaps neutral, in which case weighty arguments of gold might have induced the inhabitants to set the watch and raise the beacon. At all events, sufficient leeway is granted the poet for his conception.

But it is rather, I think, in the case of the plays when the play itself was produced by the poet. We know that he was accused largely upon the manners and customs that they are full of anachronism: Homeric poems; further, that the experience of his own generation, and persons of the time are to be seen, and that the *Eumenides*, the closing of which the *Agamemnon* is the concern with the attacks of the popular opagus. I think that I see another which has never yet been noted, so that to understand the allusions, it will be necessary to know the situation of events at the time when the plays were produced. The date of its production has long been a Greek hypothesis accompanying the text, confirmed three years ago by the discovery at Athens of an inscription recording the name of the archon of the year 458. (*Journ. Arch.*, III. 316.) Hence the date is about the first of April, 458. The date is given by Thucydides as follows (I. 101): "Previously, the Lacedæmonians had summoned the Athenians to assist them against the revolted Helots, who had taken refuge in Ithome and were besieged there. Cimon went down with a force to assist the besiegers of that precipitous height, after the blockade had lingered on for some two years; but as the Athenians succeeded no better than the Spartans, the latter became suspicious of them, and dismissed them in a fashion so blunt and discourteous that the Athenians took mortal offence at it, renounced all alliance with the Lacedæmonians, and formed a league in 461 with Argos."

This old enemy of Sparta had recovered from the prostration caused by the loss of her six thousand warriors, slain and burnt alive by Cleomenes (Hdt., VI. 80) about a generation earlier, and had recently destroyed Mycenæ, Tiryns, and some other rival towns in her vicinity.

Between Argos and Attica lay Corinth and Megara. About this time Corinth began making encroachments upon the Megarian territory, and the Megarians turned to Athens for assistance. Athens sent a force to protect the city of Megara, and also occupied the town of Pegæ, its harbor on the Corinthian Gulf, and the heights of Geranea. For greater safety, the long walls were built from Megara to its eastern harbor, to give them close connection with Athens on her own element. An Athenian fleet of two hundred sail, operating in the waters of the Levant against the Persians, was called to Egypt to aid the revolting Inaros, and at home they began active operations against the Corinthians and Epidaurians by making a descent upon the territory of the latter at Halieis, without success. Soon followed a naval battle with the Peloponnesians off Cecryphalea, in which the Athenians were victors, and war broke out with Ægina. A great battle was fought off the island, in which the Athenians vanquished their foes completely, and besieged the city of Ægina. The Corinthians, thinking the Athenians too closely occupied elsewhere to protect Megara, seized the heights of Geranea, and descended into the plain to attack the city. But the Athenians mustered all their forces, old and young, marched to meet them, and gained a double victory.

Thucydides does not give us the dates of these events, and Diodorus (XI. 77-79) extends them over the space of three years. Here an inscription comes to our aid, which shows that the operations from the descent upon Egypt to the Megarian victories must be assigned to a single year. This

inscription hangs upon the wall of the Archaic Room of the Louvre, and gives the names of one hundred and sixty-eight citizens of Athens of the Erechtheid tribe, who perished, as it relates, in "Cyprus, Egypt, Phœnicia, Halieis, Ægina, and Megara, within the same year," and who had been publicly buried by the state in the Ceramicus. It may be well to recall here the description of this ceremony given by Thucydides on the occasion following the first year of the Peloponnesian War, when Pericles delivered his famous funeral oration. He says (II. 34): "The same winter the Athenians performed the funeral ceremonies of those who had first died in the war. Three days before the burial they erect a tent, in which the bones of the dead are laid out, and every one brings to his own dead such gifts as he wishes. When the day arrives, they carry out in hearses cypress caskets, one for each tribe, containing the bones belonging to that tribe. One empty litter, handsomely arrayed, is provided for those whose bodies have not been recovered. Citizens and strangers accompany the procession, and the women who are relatives of the dead make lamentation. The burial takes place in the most beautiful suburb of the city, where all are buried who die in the wars, except those at Marathon."

It was upon an occasion like this that the stele of the Louvre was erected, and Krüger, Kirchhoff, and Dittenberger (*Sylloge Inscr. Græc.*, 3) have shown that the year to which the events there recorded belong runs from the spring of 460 to the spring of 459. The burial would take place the following autumn in the month Pyanepsion, during the celebration of the Epitaphia; hence some five months before the production of the Agamemnon, at which time the events of that mournful occasion would be fresh in the minds of the audience. If the number of one hundred and sixty-eight dead of the Erechtheid tribe was an average for each of the

ten tribes, the total number buried would have been sixteen hundred and eighty, no doubt far in excess of any year for some time, which would make it still more memorable. It is to this, then, that I see allusion in the lines of Æschylus which occur in the choral passage next subsequent to the description of the beacon-fires of the Agamemnon (427-455). The chorus has been lamenting the desolation in the house of Menelaus after the departure of Helen,—his love-sick longing for her that was across the sea when all beauty seemed banished from the world.

“ Such are the woes at home
 Upon the altar hearth, and worse than these.
 But on a wider scale for those who went
 From Hellas’ ancient shore,
 A sore distress that causeth pain of heart
 Is seen in every house.
 Yea, many things there are that touch the quick :
 For those whom each did send
 He knoweth; but, instead
 Of living men, there come to each man’s home
 Funeral urns alone,
 And ashes of the dead.
 For Ares, trafficking for golden coin
 The lifeless shapes of men,
 And in the rush of battle holding scales,
 Sends now from Ilium
 Dust from the funeral pyre,
 A burden sore to loving friends at home,
 And bitterly bewailed,
 Filling the brazen urn
 With well-smoothed ashes in the place of men;
 And with high praise they mourn
 This hero skilled and valiant in the fight,
 And that who in the battle nobly fell,
 All for another’s wife:
 And other words some murmur secretly ;
 And jealous discontent
 Against the Atreidæ, champions in the suit,
 Creeps on all stealthily ;

And some around the wall,
In full and goodly form, have sepulture
There upon Ilion's soil,
And their foes' land inters its conquerors."¹

It was by such touches as these that the poet knew how to work upon the feelings of his audience, at the same time keeping to the *vraisemblance* of the situation of the play.

We may now approach the problem of the line of beacon-fires. The first point is Ida, doubtless not the most distant peak of "topmost Gargarus," but one of the points nearer Troy and the coast. Such may be found in Mount Chigri, opposite Tenedos, 1,648 feet high, the most prominent landmark of the Troad west of the Scamander. "The view from the summit," says Mr. Joseph Thacher Clark (*Am. Journ. Arch.*, II. 137), "is magnificent. . . . Far beyond the low and hazy hills of Lemnos, the setting sun outlines with wonderful distinctness the conical peak of Athos, more than 175 kilometres distant (109 miles). This spectacle, little less than marvellous in view of the great distance from shore to shore, has been observed by the writer on many occasions: from Chigri, from the coast between Alexandria Troas, and Lekton, and even from the much more remote summit of Mount Ida." This view of Athos is also visible from the mound of Hissarlik, only eighty feet above the plain, and all the year round, as Schliemann says (*Ilios*, p. 105), whenever the weather is clear at sunset.

The next point is Lemnos. This island had been in the possession of the Athenians for some fifty years before the production of our play, and all this northern part of the Ægean was studded with tributaries of the Athenians, and notable operations had been conducted by them here since the Persian Wars, and especially within the past ten years.

¹ Plumptre's translation.

Lemnos lies about midway between the Trojan coast and Athos ; but the distance of the first leap would depend on the height assumed in Lemnos for the Hermæan summit. Some have placed this at the eastern extremity of the island, but Conze,¹ one of the most recent and accurate topographers of the island, sees no reason for fixing it there. The highest point is at the northwestern end, mounting to 1,410 feet. This would give at least sixty miles for the first beacon to traverse. Athos is easily visible from the sea off the coast, and the ancients asserted that its shadow fell upon the market-place of the town of Lemnos, which might occur at the time of the summer solstice. Athos is at least 6,500 feet high, and from it Leake says that the mountains of Eubœa could be readily triangulated. The distance to these is about the same as that from Ida to Athos, a gigantic leap of one hundred and ten miles, the greatest of our beacon chain, and the poet, as you will observe, has made special preparation for it by the height of the starting point, the height of the soaring flame of pitch-pine, like the sun itself, "so as to back the sea," and by the height (4,000 feet) of the watch of Macistus, who receives it. This mountain was in Eubœa, as the scholiast tells us, and is usually identified with the present Kandili, a long line of precipitous cliffs on the west coast above Chalcis, a conspicuous feature from many directions.

The possibility of a huge fire from Athos being visible at this distance of one hundred and ten miles has been the subject of considerable inquiry on my part. Through the kindness of Prof. Rees, who applied to the United States Coast and Geodetic Survey for information, I am able to answer the question satisfactorily with the following data. Assistant G. Davidson, in California, using sunlight on an eight-inch mirror, was able to communicate one hundred and sixty-nine

¹ *Reise auf d. Inseln d. Thr. Meeres*, p. 119.

miles ; and from Mount Shasta to Saint Helena, one hundred and ninety-one miles with a twelve-inch mirror, "notwithstanding the smoke that prevailed." For one hundred miles, a mirror of four and a half inches was found to answer very well. Assistant W. Einbeck, in Nevada and Utah, at altitudes above ten thousand feet, where the transparency of the atmosphere is less affected by dust, smoke, or haze, obtained good results with a mirror of four and a half inches up to one hundred and sixty miles ; beyond that a slightly larger mirror was preferred. Assistant A. T. Mosman says, "In the Alleghany Mountains a 2¼-inch mirror is large enough for sixty or eighty miles, but in the valley of the Ohio River a four-inch mirror is needed for thirty-five miles."

These data are interesting, as showing how far a small surface will transmit its light, but they do not satisfy the conditions of our problem of a beacon-fire of pine wood ; besides this, they all imply the use of the telescope, instead of the naked eye, in observing the light. But Assistant B. A. Colonna writes me as follows: "I have seen from the top of Snow Mountain, in the Coast Range, fires burning on the summit of the Sierra Nevada, where certainly no light was of an intensity equal to what an ordinary ten by twelve frame house would give if set on fire ; yet the whole was plainly visible to the naked eye at a distance of about one hundred and sixty miles. I think if you were to take a cord of well-seasoned pine wood, and pile it into pens so that it would burn with a good draft, you would have a blaze that could be seen at night, in fair-seeing weather, with the naked eye, two hundred miles or over, provided the wind did not blow from the fire to you. From the top of Marysville Butte in the Sacramento Valley, I have seen the stubble on fire in the valley and on the surrounding slopes for a distance of over sixty miles, the line of fire being perfectly distinct.

I have seen this in the fall, when the stubble was trampled down."

This meets our case exactly, and shows that the poet was not drawing too long a bow, but was keeping within the bounds of reality. The atmospheric conditions which he assumes appear to me to be those of a clear night (cf. *Agam.*, 4-6, 508) following a fine day after a great storm (658, 668, 900),¹ when the air is usually very clear. In Greece, as is well known, the air is far more pellucid than here. Hence the conditions of the Æschylean leap seem quite capable of fulfilment. We must remember, too, that it was along some such line as already described that Mardonius planned to notify Xerxes of the fall of Athens.

From here on, the steps are easier. The next, to Messapium (3,392 feet), is about fifteen miles; thence to Cithæron's steep (4,620 feet), twenty-six miles. Here we are upon Attic soil with her fast friend, Plataea, close under the northern foot of the mountain range, — Plataea that must often have telegraphed from Cithæron onward from peak to peak to Athens itself, if danger threatened from the north. Here on Cithæron the zeal of the warder passes even beyond his orders in the size of the flame he kindled, like a good Athenian or Plataean. Nothing shall be stinted. From Cithæron the flame darted on — observe the language — "over Lake Gorgopis, and reaching Mount Ægiplanctus bestirred the ordinance of fire."² Ægiplanctus is described by the scholiast as a mountain of the Megarid. From late sources, Gorgopis

¹ I need hardly add, that I regard the poet's assumption that Agamemnon returns to Argos on the day following the capture of Troy as a dramatic expedient only (cf. *Eum.*, 42, 166, 204, 245-247, 282). The contradiction is patent enough. Even if Verrall's ingenious explanation (*Agamemnon*, Introduction) be sound, it would not affect my argument.

² λίμνην δ' ὑπὲρ Γοργῶπιον ἔσκηψεν φῶς·
ὄρος τ' ἐπ' Αἰγίπλακτον ἐξικνούμενον
ἔτρυνε θεσμὸν μὴ χρονίζεσθαι πυρός.

is said to have been called Eschatiotis first, but its name was changed to Gorgopis, because Gorge, wife of the king of Corinth and daughter of the king of Megara, threw herself into the lake on hearing of the death of her children. As the natural sense of the Greek in our passage of the Agamemnon would place Gorgopis between Ægiplanctus and Cithæron, and λίμνη may be an estuary of the sea, as the Sea of Azof, as well as a lake, many have identified it with one of the bays on the northwest coast of the Megarid. Curtius, however, in an article published in the *Rheinisches Museum*, 1844, page 200, argued for the lake now called Bouliasméne, over against Corinth, on the ground that it was the *only lake in the isthmus*, and represents what is familiarly called "the Lake" by Xenophon, in his graphic account of the reception by Agesilaus of the astounding news of the destruction of the Lacedæmonian battalion by Iphicrates (*Hellenica*, IV. 5. 6). As to the latter fact, I admit that there can be no reasonable doubt. Xenophon did mean Bouliasméne by his "Lake." But where was Ægiplanctus? There are two heights especially prominent in the Megarid, that of Geranea, rising 4,490 feet above the Megarian plain, the highest point of the isthmus; and that now called Bisa, to the west of Geranea, shooting up boldly and grandly from the Corinthian plain to the height of 3,465 feet. This, as adjacent to the lake of Bouliasméne, Curtius calls Ægiplanctus. But a glance at the relative situation of Bouliasméne, Bisa, and Cithæron will show that we must do great violence to the Greek to admit of this, since the lake is considerably to the west, instead of the northeast, where it should be.

Last winter, at my suggestion, Mr. David Quinn, a member of the American School at Athens, visited this region, and made inquiry touching the existence of any other lake on the isthmus. He heard from one source that a young man

from Corinth, while hunting among these mountains, found a lake there, but the people in the vicinity of Bisa knew of nothing of the kind, and Mr. Quinn came to the conclusion that Curtius was right. Since then, while examining the work of a Greek named Meliarakes, entitled "Geography of Argolis and Corinthia,"¹ I discovered that he had set down on his map a small lake on the coast exactly between Bisa and Cithæron, and near the present, and what was largely in ancient days, the boundary between Megaris and Corinthia (hence Eschatiotis?). This lake is known as Mavrolimne,² so called from the blackness of its waters, which are shaded by the lofty spurs of Geranea. Although Meliarakes does not observe the fact, this lake satisfies the topographical requirements of Gorgopis, and the mythological as well. There are three routes leading from Corinth across the mountainous part of the Isthmus; one by the southeast side and the Scironian Rocks; the second over the central line of the mountains, and just to the southeast of their highest peaks, the safest route for an army; the third, turning Bisa on the northwest, and passing on up the other coast, leaving Mavrolimne a little to the left. If the frantic mother Gorge is fleeing from Corinth, she would naturally turn to her old home at Megara, and by this route would pass rather nearer Mavrolimne than Bouliasméne; and what more suitable place for her frenzied leap, than from those overhanging rocks whose blackness is flung up to meet their beetling brows from below? But the name Gorgopis seems to me to have arisen rather from the forbidding appear-

¹ Γεωγραφία τοῦ Νομοῦ Ἀργολίδος καὶ Κορινθίας, 1886.

² ὑπάρχει δὲ καὶ πρὸς τὴν βορείαν παραλίαν παρὰ τὸ ὄριον Περαχώρας καὶ Μεγαρίδος ἑτέρα μικρὰ λίμνη βαθεῖα, χωριζομένη καὶ αὕτη ἀπὸ τῆς θαλάσσης δι' ἀμμοθῶν καὶ χαλικωδῶν προσχώσεων, ἡ Μαυρολίμνη, οὕτω καλουμένη ἔνεκα τοῦ βαθέος χρωματισμοῦ τῶν ὑδάτων τῆς ἐξ ἀντανάκλασεως τῶν ὑπερκειμένων ὑψηλῶν προβούων τῆς Γερανείας, οἵτινες ἐπισκιάζουσι αὐτήν. Meliarakes, p. 133.

ance of the lake itself, while the myth was invented later as an explanation of it. I still have some hesitation, however, about identifying Bisa with *Ægiplanctus*, chiefly because I believe that we have a genuine fact of the year 459-8 in the line of signals from Cithæron to Argos.

It will be remembered that Argos is the offensive and defensive ally of Athens, that the Athenians are occupying Megara and Pegæ and the heights of Geranea, and that they are here separated from their ally Argos by hostile Corinthia, making its incursions frequently, especially towards Megara. Hence the need of instant communication between the two allies; and hence this is made by *Æschylus*, not straight down southwest through Corinthia, as we might expect without any knowledge of the circumstances, but by the leap far to the south to the Argolic territory of *Arachnæus*. Above the plain of Megara along the central road is a narrow pass, called by the Turks *Derveni*, which they habitually kept under guard in former days. Above this pass Gell says that he saw traces of an ancient fortification. It is here, no doubt, that the Athenians were posted when *Thucydides* speaks of their holding the passes of Geranea. It is true that they were dislodged by the Corinthians, and were several times withdrawn by pressure of circumstances at home; but during the year 459-8 they must have held this post the greater part of the time. That they advanced so far (some four or five hours from their main base at Megara) as to occupy the passes near Bisa Mountain, seems to me altogether improbable. That they may have used Bisa as a signal station is not impossible, but in my judgment it is rather on the heights of Geranea that we are to seek the site of the poetic name *Ægiplanctus*, whether it means the goat-trodden or the storm-beaten. The appellation occurs only in this passage of *Æschylus*. *Mavrolimne* is not quite so aptly situated

for this point as for Bisa, but near enough to suit the purpose of the poet, who may have easily become familiar with the district from the proximity of the Athenians at Megara and Pegæ.

From *Ægiplanctus* then to *Arachnæus* is some twenty-six miles, and in this flight the poet introduces a true touch of the topography when he says, "They, kindling up, sent on in boundless might a vast beard of flame so as e'en to overpass the height that looks on Saron's Gulf, and it darted on till it came to *Arachnæus's* peak." As you sweep along to-day in the railway train high up the precipitous sides of the Scironian Rocks, and cast your eye across towards *Arachnæus*, you see a steep and lofty coast, so high that you are in doubt whether *Arachnæus* is visible at all. In fact, Mr. Quinn, who ascended the peak of *Arachnæus*, tells me that Saron's waters were not visible to him from there toward Corinth, but he could see those of the Corinthian Gulf beyond, and *Parnassus* lifting up above the mountains of the Isthmus. The poet has managed his lines so as to produce the effect almost of a stop for an intermediate station on Saron's height. *Æschylus* knew his land well.

Mr. Quinn describes the view from *Arachnæus* as very grand,—all the coast of Attica from *Sunium* to *Piræus*, the mountains of *Arcadia*, the eastern shore of the *Peloponnesus* as far as *Cape Malea*, and at one's feet the plain of *Argos*, *Nauplia* on one hand, *Argos* on the other, about fifteen miles distant from *Arachnæus* as the flash flies. *Mycenæ* is totally hidden by *Mount Sara*, which rises abruptly above the town. *President Felton*, I think, was the first to prove by personal observation that the poet must have conceived the scene of the play as laid at *Argos*, and not at the Homeric *Mycenæ*, because *Arachnæus* is not visible from *Mycenæ*. But *Æschylus* might have added another beacon on *Sara* that

would have flashed the light to the recess where Mycenæ stands. But here again we see how fitly he has adapted himself to the circumstances of the hour. Mycenæ is destroyed, a hated thing in the ears of the Argive allies, who would be present in numbers to hear his play, while Argos is the power of the moment and the helper in time of need, to whom the real beacons shall be flashed.

The Greeks of to-day have the custom of lighting bonfires of pitch on the highest points in the vicinity of a church on the day when the festival of the church's saint is celebrated. Mr. Quinn tells me that the inhabitants of the present village of Cheli, lying somewhat to the north, and below the highest peak of Arachnæus, on the eve of the festival of St. Elias, whose name the mountain now bears, mount up to the summit and build there a fire, probably of pitch, as no wood is to be found there, and this fire is easily discernible on the Museum Hill at Athens. Here we may justly ask why the poet did not connect Athens at once with his line of beacon-fires by bringing them direct from Athos to the highest peak of Eubœa, Dirphys, and then by an easy leap to Pentelicus, in full view, and thence to Arachnæus. I think the answer is contained in what we have already said. He chose to traverse the more circuitous route, in order to emphasize the line in actual use along the Isthmus to Arachnæus and Argos. Were I not convinced of this, I should not have felt myself justified in treating this subject at such length.

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